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8000 Marine Fire Fighting

8100 Introduction

This plan provides basic information for responses to major fires on board vessels and waterfront facilities (as defined by 33 CFR 6) within the upper Chesapeake Bay (COTP zone). It provides policies, responsibilities, and procedures for the coordination of on-scene forces, which may include State and local public safety agencies, the U.S. Coast Guard, waterfront facility owners and operators, vessel owners and operators, private response companies, and individuals. This plan assumes that a Unified Command will be established at a marine fire-fighting event.

Additional Federal, State, and local agencies will be invited to participate in future revisions of this plan to ensure that all parties concerned with marine fires are involved in the planning process. Combating a major marine fire may require expertise in ship construction and equipment, vessel stability, shipboard firefighting techniques, damage control, knowledge of hazardous materials, and, very possibly, the services of a foreign language translator. Specialized equipment such as boats suitable as firefighting platforms, portable firefighting and dewatering pumps, shipboard communications gear, and international shore connection fittings may be required. A burning ship may have to be moved across jurisdictional boundaries either to protect other port assets or to place the burning vessel in a better position for combating the fire. In all of these cases, the coordinated effort and cooperation of several government agencies, fire departments, and the ship's crew will be necessary.

Although this plan identifies agency responsibilities and the locations of equipment available to enhance firefighting capabilities, the establishment of a comprehensive marine firefighting training program with an annual drill is a key element in the success of this plan.

All arrangements, jurisdictional relationships, and information contained within this plan will be reviewed and updated, and recommendations will be made to the COTP. The COTP will solicit additional suggestions for improvement, promulgate consecutively numbered changes to this plan and distribute them to all plan holders. All plan users are encouraged to report any errors, information changes (equipment, telephone number, addresses, etc.), and suggestions for improvement to the COTP.

8200 Unified Command

8210 Captain of the Port

8210.1 Responsibilities

The Coast Guard has been traditionally responsible for the saving of life and property upon the waters of the United States. In addition, the local Coast Guard Captain of The Port (COTP), is charged by the Ports and Waterways Safety Act (33 USC 1221) with the responsibility for safe navigation, protection of waterfront facilities, and protection of the marine environment within his area of jurisdiction. This responsibility extends not only to ships, their cargo, and crew, but structures in, on, or immediately adjacent to the navigable waters of the United States, and the resources within such waters. The Federal Clean Water Act (33 USC 1251-1376, et seq.) also charges the Captain of the Port with specific responsibility to protect the navigable waters of the United States from discharges of oil or hazardous substances.

8210.2 Authorities

To carry out his responsibilities, the Captain of the Port has the authority. under 14 USC 88 (b), to render aid and save life and property in the event of a marine related emergency (including fire), within the capability of available Coast Guard resources. In addition, the COPT has the power under the Ports And Waterways Act (33 USC 1223-1225) to direct the anchoring, mooring, or movement of a vessel; to specify times of vessel entry, movement, or departure to, from, or through ports, harbors, or other waters; to restrict vessels operation in hazardous conditions to vessels which have particular operating characteristics or capabilities; or to direct the handling, loading, discharge, storage and movement including, emergency removal, control and disposition of explosives or other dangerous cargo or substances, on any bridge or other structure on or in the navigable waters of the United States or any land structure immediately adjacent to those waters. Additionally, under the Clean Water Act (33 USC 1251-1376), The Coast Guard COTP acting under the authority delegated to him as the pre-designated On Scene Coordinator for pollution discharge response and removal, may, whenever a marine disaster in or upon the navigable waters of the United States has created a substantial threat of a pollution hazard because of a discharge or an immanent discharge of large quantities of oil or a hazardous substance from a vessel, coordinate and direct all public and private efforts directed at removal or elimination of such threat and summarily remove and, if necessary, destroy such vessel. The Intervention on the High Seas Act (33 USC 1471) extends the Coast Guards authority to take similar preemptive or corrective action onto the high seas (i.e., beyond the 12-mile territorial sea).

Specifically, it authorizes the Commandant of the Coast Guard to take such measures on the high seas as may be necessary to prevent, mitigate, or eliminate grave and imminent danger to the coastline or related interests from pollution or threat of pollution of the sea by oil, following a maritime casualty or acts related to such a casualty which may reasonably be expected to result in major harmful consequences. This authority rests with the Commandant. The COTP, through his district commander, should relay any recommendation to take such action to Commandant (GM).

8210.3 Policy

The Coast Guards firefighting assistance policy is set forth in the Marine Safety Manual, Volume VI, Sec. 86-6, COMDTINST M16000.11 A summary of this policy is as follows: "While it is clear that the Coast Guard has an interest in fighting fires involving vessels or waterfront facilities in or along the navigable waters of the United States or fires in the vicinity of Coast Guard property, this interest does not extent to preemption of local responsibility and authority for firefighting. The involvement of Coast Guard forces in actual firefighting shall be to a degree commensurate with our personnel and equipment levels. The Coast Guard intends to maintain it's historic "assistance as available" posture without conveying the impression that we stand ready to relieve local jurisdictions of their responsibilities. Additionally, the response actions taken shall pose no unwarranted risk to Coast Guard personnel or equipment".

The following applies to a Coast Guard supervised response:

"In those areas in which the supervision of firefighting activities falls to the Coast Guard, the Coast Guard On Scene Coordinators (OSC) orders for coordination of firefighting forces, supplied by other agencies or organizations, shall be passed through the senior public safety official, firefighting organization officer or firefighter of each organization".

To support this policy, the Coast Guard Captain of The Port works with port authorities and local governments; firefighting is and should remain a state and local function.

This plan is based on the assumption that a major marine fire, particularly a vessel fire, will require resources beyond those locally available. The Coast Guard COTP will help coordinate requests for State and Federal resources and assist local firefighting units to the extent that resources permit. If a fire occurs on a vessel underway or at anchor, "assistance as available" may include coordination of firefighting efforts if the Coast Guard is in the best position to assume command. However, Coast Guard participation does not relieve local jurisdictions of their responsibilities.

8210.4 Response

Responsibilities of the Coast Guard Marine Firefighting Coordinator (MFC) or other individuals representing the Coast Guard COTP at a major fire on board a vessel or at a waterfront facility include:

a. Assume the position of Incident Commander for a burning vessel when the fire department with jurisdiction is unable to respond.

- b. Assume operational control of all on-scene Coast Guard forces.
- c. Coordinate safety zones as necessary.
- d. Provide available information on involved vessels and waterfront facilities. This may include emergency contact information, the location and type of any hazardous material, layout and construction, stability, and marine firefighting techniques.
- e. Respond to oil or hazardous materials discharges. Actual removal may be delayed until firefighting operations are terminated.
- f. Investigate and coordinate tugs for assistance in relocating moored or anchored vessels as necessary.
- g. Alert owners/operators of terminals or vessels at risk and initiate Marine Safety Broadcasts to alert vessel traffic in the area.
- h. Conduct initial post-fire, maritime casualty investigations.
- i. Assist the Responsible Party in coordinating technical experts, such as marine chemists, salvage companies, etc. (see Section <u>4700 Technical</u> <u>Experts</u> of the Area Contingency Plan)

8220 Local Fire Department

Local fire departments within the COTP Baltimore zone respond to all reports of fire within their area of jurisdiction, including fires at waterfront facilities and onboard vessels. The fire department receiving the report of the fire/incident will establish command structure appropriate for the emergency (including a Unified Command) and ensure the COTP is notified of the emergency. All requests for Coast Guard assistance should be made via the ACTBALT Operations Center.

Local fire departments responding to large vessel fires will provide their side of the international shore tie connection.

A comprehensive list of Fire Departments throughout the State may be found at the following web links:

- http://www.mfri.org/newlinks/mdfs.html
- http://www.firehouse.com/links/USA Departments/Maryland/

8230 Maryland Port Administration

As a division of the Maryland Department of Transportation (MDOT), the Maryland Port Administration (MPA) is responsible for managing all state-owned marine terminals. These terminals include Dundalk, Sea Girt, North Locust Point, South Locust Point, Pier 1-Clinton Street, Fairfield, and the Port of Cambridge. MPA does not maintain its own firefighting capabilities; rather, it relies on the Baltimore City and Baltimore County Fire Departments for marine fire, hazardous material, and medical incidents at its facilities in the Port of Baltimore and the Cambridge Volunteer Fire Department at its facility in the Port of Cambridge.

8240 District Of Columbia Harbor Master

The DC Harbor Master (who is also the Police Lieutenant in charge of the local precinct) has overall responsibility for safety on the waters of the Potomac River within the District of Columbia. However, the local fire department has primary responsibility for marine fires that occur within DC waters.

8250 Vessel Crew

The Master has overall responsibility for his/her vessel and is always in charge of firefighting efforts by vessel personnel. The Master may also provide advice to the Incident Commander on the use of municipal personnel and equipment. The Master and crew (particularly the Chief Engineer) can also provide crucial information regarding the vessel's construction, cargo, and firefighting systems.

8260 Owner/Operator

Regardless of other response resources, the owners and operators of vessels and facilities retain a fundamental responsibility for providing response resources, information, and ensuring safety and security on site.

8270 Mid-Chesapeake Maritime Emergency Response Group (MCMERG)

The Mid-Chesapeake Marine Emergency Response Group (MCMERG) is a planning and coordination body filling a role similar to that of the marine firefighting subcommittees found within other Area Committees. MCMERG will continue to be a clearinghouse for information and will provide suggestions for future revisions of this plan.

8280 Maryland Emergency Management Agency

MEMA is organized to plan for incidents through Emergency Support Functions. Emergency Support Function Four is the Firefighting annex for the State of Maryland, which includes maritime fires. If MEMA is activated for an incident, they may be able to offer assistance in coordinating state resources.

8300 Mutual Aid Agreements

Under 42 USC 1856(d), an agency charged with providing fire protection for any property of the United States may enter into reciprocal agreements with State and local firefighting organizations to provide for mutual aid. This statute further provides that an agency may render emergency assistance in the absence of a reciprocal agreement, when it is determined by the head of that agency to be in the best interest of the United States.

Many jurisdictions within the State of Maryland have Mutual Aid Agreements or Memorandums of Understanding, particularly in the firefighting community. Written agreements are often necessary for financial recovery for shared resources from the Federal Emergency Management Agency during declared disasters.

The Maryland General Assembly passed the "Maryland Emergency Management Assistance Compact (MEMAC)" on June 1, 2002. The compact enables local jurisdictions to pass local ordinances to develop partnerships with other jurisdictions to share resources during disasters and emergency operations. MEMAC does not supercede existing memorandums of understanding/agreements, but instead hopes to expand them beyond traditional Fire/EMS resource sharing, into other public agencies.

8400 Planning Considerations

8410 Notification Procedures

The prompt notification of the cognizant fire department is the first and most important step in mobilizing the necessary response resources. All municipal fire departments use "911" systems and coordinate large responses via mutual aid radio system. Initial notification of a marine incident should be directed to the Coast Guard, the local firefighting jurisdiction having authority, and any jurisdictions that may be impacted via mutual aid frequencies and/or by telephone. Additional notifications of police and emergency preparedness personnel should also be considered.

Another major avenue available to the marine community for reporting emergencies is Channel 16 VHF-FM (156.8 MHz). Coast Guard Activities Baltimore monitors this frequency continuously. All initial calls received by the Coast Guard will be relayed to the cognizant fire department.

If a burning vessel must move through multiple firefighting jurisdictions to get to a designated pier or anchorage for firefighting purposes, all fire departments whose boundaries the ship will pass through must be notified.

8420 Communications

Primary response communications with the Coast Guard will be via marine VHF radiotelephone. Responding units shall make initial contact with the Coast Guard by calling for "Activities Baltimore" on Channel 16 VHF-FM (156.8 MHz). The Activities Baltimore OPCEN will then direct the responding unit to an appropriate tactical frequency. If communications with the Coast Guard on an assigned tactical frequency are lost, the responding unit shall reestablish communication on Channel 16.

Tactical frequencies for COTP Baltimore include VHF-FM Channels 21A (157.050 MHz), 23A (157.150 MHz), 81A (157.075 MHz), 82A (157.125MHz), and 83A (157.175 MHz). Response units of all agencies responding to a marine fire are authorized to transmit on these frequencies at the direction of the COTP and should have their radios programmed accordingly.

The primary USCG-public liaison channel is VHF-FM Channel 22A (157.100 MHz). Urgent marine information broadcasts are conducted on this channel. During a major incident, Channel 22A may be used to inform mariners of hazardous conditions or restrictions on the use of waterways.

Follow radio procedures in accordance with Incident Command System protocols. Do not release over radio circuits the names of response personnel and civilians involved in the operation. All un-encoded radio communications are susceptible to monitoring by the media and the public.

Use of the ICS Communications Plan will assist in clarifying the communications policy for incidents. Form 205 Incident Radio Communications Plan

8430 Termination Of Response Activities

Termination must be by mutual agreement of the Captain of the Port and the Incident Commander. Unless otherwise directed by a higher authority, once response operations have begun, they will not be terminated until the fire is out and the incident is under control.

8430.1 Resolution Of Disputes

Disputes will be resolved at the lowest possible level. Disputes, which cannot be resolved by resources in the field, will be referred to the command post for resolution by the senior Coast Guard and Fire Department representatives present. If not resolved at the command post, they will be referred to the Captain of the Port and the appropriate Fire Chief. The COTP has broad powers and influence in the maritime community and can quickly resolve disputes involving vessel masters, vessel owners, and facility owners and operators.

8440 Locating The Vessel For Firefighting

The success or failure of shipboard firefighting operations will be influenced by the vessel's location. If the vessel is located in a remote or otherwise inaccessible location, the opportunity for saving it may be lost. The COTP will work with fire departments, port officials, and other agencies to identify the best sites for locating a burning vessel. Such sites may include anchorages, piers, and grounding sites. Local jurisdictions are encouraged to pre-identify locations suitable for vessel relocation.

The COTP can, in the interest of protecting life, property, or the environment, order that a vessel be moored at a particular pier or terminal to facilitate firefighting efforts. However, since such action might subject the Federal government to liability for costs and damages incurred by the property owner, such action can be anticipated only in the absence of other alternatives.

8440.1 Anchorages

Fire emergency anchorages are not yet pre-designated in this plan. Until this is accomplished, emergency anchorages in the COTP Baltimore zone will be selected based on existing conditions.

Anchorages are usually temporary while firefighting equipment is being staged and organized. When selecting an anchorage for firefighting, the COTP and Incident Commander shall consider:

- a. Accessibility: The anchorage should be near a pier or other location where firefighting resources can be readily staged and brought to the fire.
- b. Water depth: The anchorage must be deep enough at mean low water for the burning vessel and any fire boats, salvage barges, or other necessary floating equipment. In addition, the bottom should ideally have a level, non-sloping contour to minimize capsizing potential if the burning vessel goes aground.

- c. Usage: The anchorage should be unoccupied or capable of being quickly cleared of other vessels. Firefighting vessels must have easy access to the burning vessel, and other vessels should be protected from the impacts of fire, smoke, and debris.
- d. Weather: The anchorage should be protected from strong winds or currents, which could hamper firefighting, pollution response, and salvage efforts.
- e. Environmental Impacts: The anchorage should not be located in or near environmentally sensitive areas that could be impacted by leaking oil, hazardous material, excess foam, or debris.
- f. Shipping Impacts: Ideally, the anchorage should not be located where busy channels and waterfront facilities may be impacted by the fire or firefighting efforts.
- g. Population: The anchorage should not be located near heavily populated areas that may be adversely impacted by smoke or hazardous materials.

8440.2 Moorings

Piers, wharves, and facilities ideally suited for vessel firefighting are not yet pre-designated in this plan. Although they are not the only sites that should be considered when locating a burning vessel, they offer the greatest potential to make effective use of shore-based firefighting resources. In addition to those considerations listed for fire emergency anchorages, the COTP and Incident Commander shall consider the following when selecting a mooring location:

- a. The severity of the fire.
- b. Proximity to bridges, highways, and other transportation routes.
- c. The mooring's availability for an extended period.
- d. The availability of water and electricity.
- e. Pier Construction (fire resistance, strength, etc.).
- f. Prevailing winds.
- g. The availability of firefighting staging areas.
- h. The presence of hazardous materials.
- i. The availability of special equipment.
- j. Bottom obstructions near the mooring.
- k. Concerns of the vessel and facility owners/operators.
- I. Concerns of State and local agencies.

8440.3 Grounding Sites

Temporary grounding sites are not yet pre-designated in this plan. Any decision to temporarily ground a burning vessel and any grounding site selected must be approved by the COTP. In addition to those considerations listed for fire emergency anchorages, the COTP and Incident Commander shall consider the following when selecting a grounding site:

- a. Bottom Type: Must be soft enough to avoid rupturing the ship's hull and level enough to minimize capsizing risks.
- b. Water depth: Must be shallow enough that the ship will not sink below the main deck, yet deep enough for fire boats, salvage barges, and other floating equipment to approach.
- c. Commercial Impacts: Channels, anchorages, and waterfront facilities may be blocked for extended periods of time by the wreck associated debris.

8440.4 Intentional Sinking

When a vessel and its cargo are deemed a total loss, it may become necessary to sink it in an area where environmental damage is minimized. If this occurs in the wrong location, it could block vessel traffic and the subsequent pollution could impact environmentally sensitive areas. Determining a suitable location for a sinking vessel will be accomplished by a group of Federal, State, and local representatives convened by the COTP. Although this option has historically been used at coastal ports, *it is not considered a practical option within the COTP Baltimore zone*.

8450 LNG Incidents

8450.1 LNG Facilities Within Our Area of Responsibility

Dominion Resources is refurbishing and plans to operate at an existing LNG Terminal, located offshore on the Chesapeake Bay, at Cove Point, MD.

Facility Operators plan to import LNG from around the world by tank vessel. The facility can accommodate up to two LNG carriers at a time, at its offshore terminal. Present plans are to receive up to 90 ships annually.

In addition, Dominion Resources is constructing 87 miles of pipeline from the facility to its main distribution facility in Richmond, VA; and constructing new storage tanks which will hold up to 850,000 barrels of product.

8450.2 LNG Hazards

According to a recent Department of Energy (DOE) environmental assessment, the principal hazard in the immediate area of a release is contact or exposure to the cryogenic liquid.

However, LNG will produce highly flammable vapors as product temperature rises due to contact with the ambient environment. These vapors, in a 5- to 15-percent mixture with air can produce an intense fire and/or explosion in the vicinity of an ignition source. Once ignited (and if present in sufficient quantities) the release will cause high levels of thermal radiation.

In the event of a large-scale downwind release and fire, facility personnel have identified a thermal exclusion zone within the facility perimeter, based on the intensity of the fire, quantity released, and whether the fire was contained. Hazard to surrounding population is considered minimal, with the greatest danger being to homes and vehicles transiting the area along the Southern perimeter of the facility. The likelihood that this would occur, as recent industry-wide tests have indicated, is remote. When test results for LNG have been compared with that of gasoline and liquefied petroleum gas (LPG), the risks posed gasoline and liquefied petroleum gas fires were much greater due to their properties.

8450.3 Firefighting Resources and Consequence Management

In the event of a fire and/or explosion, the facility would immediately mobilize its personnel and equipment to combat and/or contain the fire. In addition, local area fire departments would respond to assist, as needed. Vessel and/or offshore terminal fires would be fought by facility personnel and pose little or no threat to shoreline communities. In addition, a safety zone would be established and maintained by Activities Baltimore to minimize threat to marine traffic in vicinity of the fire, if any.

Local Police and Emergency Services would provide evacuation and/or safety information to surrounding populations and control the movement of vehicular and pedestrian traffic through the area.

A list of area firefighting resources is provided below:

Prince Frederick Volunteer Fire Department

<u>Equipment</u>

Solomons Volunteer Fire Department

- Equipment
- SOP

St. Leonard Volunteer Fire Department

Equipment

8450.4 Scenario

Since 1952, there have been no major releases or accidents involving LNG ships. Nevertheless, accidents do happen.

 Scenario: Catastrophic release from an LNG storage tank aboard a tank vessel (involving the release of approx. 20,000 cubic meters of product).

8450.41 Discussion

Defensive actions should begin as soon as possible to prevent or minimize damage to public health and welfare, and the environment. These actions include determining the cause of release, damage control, and salvage operations.

According to the DOE Environmental Assessment (1991), ignition of the product at or near the source of discharge would result in little or no danger to anyone except vessel and dockside personnel, because the properties of the product at point of release and the intensity of the fire would consume nearly the entire release. Vessel and facility personnel would provide fire suppression and cool adjacent tanks to prevent the spread or involvement of other tanks. Local fire departments would assist in fire suppression to minimize the resulting thermal radiation plume from the fire.

Ignition of the release downwind of the source would result in significant hazard to affected areas along the path of release. The estimated rate of movement in light winds (10 mph) can reach a maximum of 3.3 miles in 25 minutes. Within a 3.3 mile radius there is a small community at Cove Point and a major shipping channel. The Calvert Cliffs Nuclear Power Plant is outside this perimeter. Evacuation would be from the waterside or along the beachhead, as the thermal plume is expected to make evacuation via Cove Point Road (the main thoroughfare) impractical.

8450.42 Response Procedures

Response procedures are dependent upon several factors including:

- Location of the spill in respect to highly sensitive areas and high population zones.
- Size and cause of the release.
- Prevailing weather conditions, including wind direction and speed.
- Elapsed time between the release and implementation of the LNG contingency plan.

8450.43 LNG Spills

In the case of a large uncontrolled LNG release where ignition has not yet occurred, the following should be considered:

- Secure the area and eliminate all sources of ignition.
- Determine the direction in which the vapor plume will track, accounting for prevailing wind conditions. In the interest of public safety, evacuation of populated areas in the path of the plume should not be considered.
- In small fires, rapid vapor dissipation is normally encountered. LNG release notifications and response should parallel the response to a serious pollution incident.

8450.44 LNG Fire

The following should be considered when responding to LNG fires:

 There are times when extinguishing an LNG fire may create a greater hazard than letting it burn. If a large pool fire is extinguished, vapors form and escape into the surrounding atmosphere creating a vapor cloud. If the LNG vapors reach an ignition source before they are outside the range of flammability, greater damage could result.

- A dry chemical fire-extinguishing agent (e.g., purple K) is most effective in fighting LNG fires. Carbon dioxide and halogenated hydrocarbons can also extinguish LNG fires. Foam and water will not extinguish LNG fires, although foam can be used to control the rate of vaporization of a pool of LNG.
- Never extinguish the fire until the source has been secured.
- Energize the vessel's water spray system and the facility's foam system.
- Never direct a fire-extinguishing agent at the surface of a pool. This
 disturbs the surface causing the liquid to vaporize faster, which
 creates a larger fire.

8500 Training

8510 Maryland Fire Rescue Institute (MFRI) at the University of Maryland

MFRI has developed a training program "Shipboard Firefighting for Land Based Firefighters." This program certifies graduates as shipboard firefighters. The curriculum developed by MFRI led to the International Fire Service Training Association textbook "Marine Fire Fighting for Land-Based Firefighters" being published.

University of Maryland Maryland Fire Rescue Institute College Park, Maryland 20742

Phone: 301-226-9930

www.mfri.org

8520 Texas A&M

Located in College Station, Texas. This university offers several different firefighting courses that may be useful to response personnel. In particular the Marine Firefighting and Emergency Training Course offers a 40 hour, one week program aimed at providing personnel in the Marine and Transportation industry with expertise in various phases of shipboard firefighting and emergency procedures. Basic areas of emphasis include fire prevention, fore suppression and rescue. A schedule of classes and fees may be obtained from the university:

Fire Protection Training Division Texas Engineering Extension Service Texas A&M University System College Station, Texas 77843

Phone: 979-845-1158

http://teexweb.tamu.edu/esti

8530 Virginia Maritime Response Team

Virginia's Maritime Response Team offers and annual symposium with training and exercises related to marine firefighting.

Phone: 757-440-7039

8540 Tri-State Maritime Safety Association

The Tri-state Maritime Safety Association (TMSA), combining the Delaware River and Bay Marine Fire Fighting Task Force (MFFTF) and Tri-state Search And Rescue (TriSAR), promotes partnerships between local responders and the maritime community for regional maritime emergency preparedness within Delaware, Pennsylvania, and New Jersey.

401 Marsh Lane, Suite One Newport, Delaware, 19804

Phone: 302-998-8599 FAX: 302-993-9085 EMail: info@trimsa.org

http://216.219.253.232/trimsa.org/pages/542447/index.htm

8550 Maritime Institute of Technology & Graduate Studies (MITAGS)

MITAGS is a is a non-profit continuing education center for professional mariners. The Institute provides training to civilian and military mariners from around the globe. The training includes firefighting courses.

5700 Hammonds Ferry Road Linthicum Heights, Maryland 21090

Phone: 410-859-5700

http://www.mitags.org/home

8560 Calhoun MEBA Engineering School

20750 St. Michaels Road Easton, Maryland 21601-7550

Phone: 410-822-9600

8570 Ludeburg School of Seamanship

The Paul Hall Center for Maritime Training and Education is a non-profit maritime school affiliated with the Seafarers International Union. If has firefighting facilities at its 65 acre campus in Piney Point, Maryland.

Lundeberg School of Seamanship P.O. Box 75 Piney Point, MD 20674-0075

Phone: (301) 994-0010

http://www.seafarers.org/index.xml

8600 Response Resources

Appendix 9200 Personnel Services from the Area Contingency Plan contains a list of local Marine Firefighting Resources.

Commercial firefighting companies may also be hired to assist local firefighters during large-scale emergencies.